

MAY 25 1984

CERTIFIED MAIL: RETURN RECEIPT REQUESTED (P 455 383 719)

Mr. G. W. Daigre  
 Environmental Control Manager  
 Dow Chemical U.S.A.  
 Louisiana Division  
 Building 2501  
 P.O. Box 150  
 Plaquemine, Louisiana 70764

Re: Application to Discharge to Waters of the United States  
 Permit No. LA0003301

Dear Mr. Daigre:

Enclosed is the public notice, fact sheet, and a copy of the permit which this Agency has drafted under the authority of the National Pollutant Discharge Elimination System. A copy of the final permit will be mailed to you when the Agency has made a final permit decision.

Should you have any questions concerning any part of the permit, please feel free to contact the Permits Branch at the above address or telephone (214) 767-4375.

Sincerely,

/s/Myron O. Knudson

Myron O. Knudson, P.E.  
 Director, Water Management Division (EW)

Enclosures

cc w/permit copy:  
 Louisiana Department of Natural Resources

12/19/83:DEHN:ic:M5:353DEH01

		CONCURRENCES			
SYMBOL	2405	BWP	5/16		
SURNAME	BECKER	HANNESSch/29cr			
DATE	5/11/84				

EPA Form 1320-1 (12-70)

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 GPO : 1983 O - 80

P 455 383 719

## RECEIPT FOR CERTIFIED MAIL

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PS Form 3800, Feb. 1982

Advertising Order Number 4T-3298-NNLX  
U.S. Environmental Protection Agency  
Public Notice of Draft NPDES Permit(s)

May 26, 1984

This is to give notice that the U.S. Environmental Protection Agency, Region 6, has formulated a Draft Permit for the following facility (facilities) under the National Pollutant Discharge Elimination System. Development of the draft permit(s) was based on a preliminary staff review by EPA, Region 6, and consultation with the State of Louisiana. The State of Louisiana is currently reviewing the draft permit(s) for the purpose of certifying or denying Certification of the permit(s). The permit(s) will become effective within 30 days after the close of the comment period unless:

- a. The State of Louisiana denies certification, or requests an extension for certification prior to that date.
- b. Comments received prior to June 26, 1984 warrant a public notice of EPA's final permit decision.
- c. A public hearing is held requiring delay of the effective date.

EPA's contact person for submitting written comments, requesting information regarding the draft permit, and/or obtaining copies of the permit and the Statement of Basis or Fact Sheet is:

Mr. Mark Satterwhite  
Permits Branch (6W-PS)  
U.S. Environmental Protection Agency  
Interfirst Two Building  
1201 Elm Street  
Dallas, Texas 75270  
(214) 767-2765

EPA's comments and public hearing procedures may be found at 40 CFR 124.10 and 124.12 (Federal Register volume 45, No. 98, Monday, May 19, 1980). The comment period during which written comments on the draft permit may be submitted extends for 30 days from the date of this Notice. During the comment period, any interested person may request a Public Hearing by filing a written request which must state the issues to be raised. A public hearing will be held when EPA finds a significant degree of public interest.

EPA will notify the applicant and each person who has submitted written comments or requested notice of the final permit decision. A final permit decision means a final decision to issue, deny, modify, revoke or reissue, or terminate a permit. Any person may request an Evidentiary Hearing on the agency's final permit decision. However, the request must be submitted within 30 days of the date of the final permit decision and be in accordance with the requirements of 40 CFR 124.74. Any condition(s) contested in a request for an evidentiary hearing on an Existing Source may be stayed if the request for a hearing is granted. If any condition(s) contested in a request for an evidentiary hearing are granted on a New Source, New Discharger, or Recommencing Discharger the applicant shall be without a permit.

Further information including the administrative record may be viewed at the above address between 8 a.m. and 4:30 p.m., Monday thru Friday.

NPDES authorization to discharge to waters of the United States, permit No. LA0003301.

The applicant's mailing address is:

Dow Chemical U.S.A.  
P.O. Box 150  
Plaquemine, Louisiana 70764

The discharge from this existing discharge is made into the Mississippi River and Bayou Bourbeaux, a water of the United States classified for secondary contact recreation, domestic raw water supply and propagation of fish and wildlife. The discharge is located on that water just north of Plaquemine, Louisiana at the border of the West Baton Rouge and Iberville Parishes. A fact sheet is available. Under the standard industrial classification (SIC) codes 2869 and 2819, the applicant's activities are operation of facilities to manufacture methyl cellulose, chlorine, caustic, high and low density polyethylene, chlorinated polyethylene, ethanolamines, dowanols, ethylene/propylene oxides and glycol, light olefins, BTX, chlorinated methanes, chlorinated solvents, ethylene dichloride/vinyl chloride and research facilities.

The changes from the previously issued permit are: effluent limitations and monitoring requirements which reflect application of BAT treatment of wastewater.



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
**REGION VI**  
**1201 ELM STREET**  
**DALLAS, TEXAS 75270**

**FACT SHEET**

For proposed National Pollutant Discharge Elimination System (NPDES) Permit No. LA0003301 to discharge to waters of the United States.

Issuing office: U. S. Environmental Protection Agency  
Region VI  
InterFirst Two Building  
1201 Elm Street  
Dallas, Texas 75270

Applicant: Dow Chemical U.S.A.  
Louisiana Division  
P.O. Box 150  
Plaquemine, Louisiana 70764

1. The applicant currently operates facilities for the manufacture of methyl cellulose, chlorine, caustic, high and low density polyethylene, chlorinated polyethylene, ethanolamines, dewanals, ethylene and propylene glycols and oxides, light olefins, chlorinated methanes, chlorinated solvents and ethylene dichloride/vinyl chloride, and research facilities.
2. As described in the application, the plant site is located in Iberville Parish, Louisiana. Discharge is to the Mississippi River in Segment No. 0701 of the Lower Mississippi River Basin.
3. The known uses of the receiving waters are:  
Secondary contact recreation, propagation of fish and wildlife, and domestic raw water supply.
4. Stream standards are:  
The general criteria and numerical criteria which make up the stream standards are provided in "State of Louisiana Water Quality Criteria," Louisiana Stream Control Commission, 1977.

5. The following is a quantitative description of the discharge described in the application:

a. <u>Outfall</u>	<u>Flow Frequency</u>	<u>Avg/Daily (MGD)</u>	<u>Max/(MGD)</u>	<u>Min/(MGD)</u>
001	Continuous	750	770	624
002	Intermittant*	N/A	N/A	N/A
003	Intermittant*	N/A	N/A	N/A
004	Intermittant*	N/A	N/A	N/A
005	Intermittant*	N/A	N/A	N/A
006	Intermittant*	N/A	N/A	N/A
007	Intermittant*	N/A	N/A	N/A
008	Intermittant*	N/A	N/A	N/A

\*Wet weather flow only.

b. <u>Outfall</u>	<u>Temp. °F Avg/Summer</u>	<u>Temp. °F Avg/Winter</u>	<u>Temp. °F Max</u>	<u>Min</u>
001	96.8	73.4		
002 through 8	ambient			

c. Outfall	Parameter	Effluent Characteristics	
		Daily Avg (mg/l)	Daily Max (mg/l)
001	Biochemical oxygen demand		
001	Chemical oxygen demand		
001	Total organic carbon		
001	Total suspended solids		
001	Ammonia nitrogen		
001	Total residual chlorine	0.6	
001	Total organic nitrogen		0.9
001	Oil and grease		0.9
001	Total copper	N/A	0.18
001	Total lead	N/A	0.09
001	Total nickel	N/A	0.07
00	Benzene	N/A	0.015
001	Ethylbenzene	N/A	
001	Toluene	N/A	
001	Methylchloride	N/A	
001	Methylene chloride	N/A	.016
001	Chloroform	N/A	.035
001	Carbontetrachloride	N/A	
001	Dichlorobromomethane	N/A	
001	Chlorodibromomethane	N/A	
001	1,2-dichloroethane	N/A	.015
001	1,2-dichloropropane	N/A	.019
002 thru 008	Total Organic Carbon	N/A	<50
002 thru 008	Oil and grease	N/A	<15

6. On the basis of preliminary staff review, the Environmental Protection Agency, after consultation with the State of Louisiana, has made a tentative determination to issue a permit for the discharge described in the application.

7. The proposed effluent limitations are contained in the attached proposed draft permit.

8. The following items were utilized or considered in establishing the basis for the proposed draft permit:

- Existing NPDES Permit LA0003301, effective February 10, 1980, expiration March 31, 1981 and extended by regulations upon application by permittee;
- NPDES application (Form 1 & 2C) dated January 5, 1981 and supplemental information April 15, 1983; August 18, 1983; September 9, 1983;
- 40 CFR Part 414 & 416 proposed March 21, 1983 Organic Chemical guidelines;
- 40 CFR Part 415 promulgated June 29, 1983 Inorganic Chemical guidelines;
- Plant site visit January 10, 1983;
- The Organic and Inorganic Chemical Development Documents;
- Consultations with the Louisiana Department of Natural Resources.

9. The following is an explanation of calculations or other necessary explanation of the derivation of specific effluent limitations and conditions, including a citation to the applicable effluent limitation guideline or performance standard provisions as required under 40 CFR §122.44 and §122.45 and reasons why these are applicable:

The final discharge at outfall 001 is comprised of less than 20 MGD of process waste water in about 650 MGD non-contact cooling water and uncontaminated storm drainage. Application of Best Available Technology (BAT) limitations at the final outfall would incur analytical difficulties. Therefore, BAT limitations were moved upstream to the source of the pollutants.

The Dow sewage system, being conceived long before NPDES regulations, is not amenable to retrofitting stream segregations, although the intake system is totally segregated from the effluent canal. This layout requires effluent regulations at upstream sources prior to entering the effluent canal. The permit requirements regulate discreet internal outfalls and every effort was made to avoid an effluent limitation being applied to 2 or more sources, i.e., sum of outfall requirements were eliminated as practiced in the BPT permit.

The upstream sources were chosen by manufacturing areas. For example, the chloro-alkali II plant, chlorine plant and caustic plant are regulated by the Inorganic Chemical effluent guidelines for the Chlorine-caustic subcategory and this area is the 300 area. Since all discharges flow to outfall 001, the internal outfalls regulated are 301 (chloro-alkali II), 311 (chlorine plant), 321 (chlorine plant rectifier cooling water), 331 (caustic plant 50% caustic evaporator barometric condenser water), 341 (caustic plant 73% caustic evaporator barometric cooling water), 351 (caustic purification cooling water, and 361 (caustic plant non-contact cooling water). The guidelines were appropriately applied to internal outfalls 301 and 311.

Outfall 0001 - combined process, utility, cooling and stormwater drainage.

This is the entire combined outfall, treatable process outfalls and contaminated stormwater are treated and monitored prior to entering the return canal. Acidic and alkaline process streams are controlled to achieve pH neutralization at the final outfall. The continuously monitored stream must comply within the range of 6 to 9 pH a minimum of 99% pursuant to 40 CFR §401. Continuous monitoring of temperatures is asked for at this outfall. The pH instrument must be adjusted for temperature and an assessment of the thermal impact combine for this requirement.



Total residual chlorine is fairly ubiquitous at the Dow facility. Monitoring only is asked for to help identify fugitive sources and point out unintentional releases of chlorine.

Biomonitoring is asked for at the final outfall to assess the containment and stream segregation endeavors. BAT treatment at the various units should eliminate toxicity after such dilution. However, the possibility of priority and other toxicants entering the final outfall discharge is a remote but finite possibility.

In order to meet the goals of the Clean Water Act as enumerated in Section 101, the EPA may require under the authority of Section 308 that treated effluents be biomonitored. The discharge of toxic priority pollutants from several internal outfalls have been established in the consolidated application or its potential has been demonstrated earlier in this document, and permit requirements have been established for toxic priority pollutants which represent the degree of effluent reduction attainable through the application of BAT (best available technology economically achievable). While Region 6 feels comfortable with the ability of its BAT permits to control the discharge of toxics, the monitoring of specific chemical parameters alone does not measure toxicity. The most direct and cost-effective approach to measuring effluent toxicity is to perform a static bioassay test of the treated effluent.

The permittee will utilize the screening test procedures and LC50 methodology set out in "Methods for Measuring the Acute Toxicity of Effluents to Aquatic Organisms," EPA-600/4-78-012. No presumption should be made should the permittee pursuant to conditions specified in the permit need to establish the LC50 of the treated effluent. The bioassay information will be used by the State and EPA in determining which receiving waters may have existing or potential use impairments. The effluent bioassay information by itself will not be used to derive permit limits nor used to show cause and effect relationships. Other data gathering such as fixed station monitoring, intensive surveys, fate and effect studies and/or chronic testing would be necessary to establish cause and effect relationships. All of this information together would then become a part of the continuing planning process used to direct attainability studies, site specific criteria modification studies, and water quality permitting requirements. The bioassay data will not be used in determining compliance with the permit limits. Compliance with the permit limits will rely on chemical testing.

#### Area 100 - Chlorinated polyethylene area.

The BPT conditions of this outfall is considered BCT except for the potential presence of total residual chlorine and a backup oxygen demand parameter. Therefore, TOD and TSS are continued and monitoring for COD and TRC is asked for. A limit for TRC was established at 2 mg/l daily maximum.

#### Area 200 - Once-through cooling water from methyl cellulose unit.

Reporting of flow and pH is asked for. The cooling water was described as non-contact in the application. Therefore, a limit of 5 mg/l net increase in TOD was established as a daily maximum limit for 0201. The technology employed for this requirement is timely plant maintenance and proper cleanup and spill prevention procedures.

### Area 300 Chlor-Alkali II and Chlorine Plant .

Effluent limitations and monitoring requirements were established at outfalls 0311 and 0321 for the Chlor-Alkali II and Chlorine plants for total suspended solids, total residual chlorine, copper, lead and nickel as set forth in the Inorganic Chemical effluent guidelines promulgated in 40 CFR Part 415.62(b) and 415.63(b).

The NPDES application reported treatable quantities of halogenated organics. The proposed organic chemical guidelines do not apply at this outfall since the technology is based upon activated sludge treatment. Chloro-alkali effluent is not amenable to this technology. However, physical/chemical treatment of steam/air stripping or activated carbon adsorption technology is available.

The inorganic chemical development document was utilized to derive equitable flow rates to apply BAT technology for control of halocarbons at 0311 and 0321. The 30-day average and daily maximum achievable levels were established based upon best professional judgment. The product of the flow and the achievable levels resulted in the proposed permit limitations in lbs/day total purgeable halocarbons. The daily maximum limit represents the 99% confidence level as applied to these discharges. The daily maximum limit at 0311 is calculated as an example:

$$0.387 \text{ MGD} \times 8.34 \text{ lbs/gal} \times 1.6 \text{ lbs}/10^6 \text{ lbs (ppm)} = 5.3 \text{ or } 6 \text{ lbs/day.}$$

This process discharge requires BAT abatement for several metals, halocarbons and total residual chlorine, a biomonitoring requirement is therefore asked at the point just prior to entering the Dow return canal based upon 24-hr composite sampling.

In order to meet the goals of the Clean Water Act as enumerated in Section 101, the EPA may require under the authority of Section 308 that treated effluents be biomonitored. The discharge of toxic priority pollutants from outfall 0301 or its potential has been demonstrated earlier in this document, and permit requirements have been established for toxic priority pollutants which represent the degree of effluent reduction attainable through the application of BAT (best available technology economically achievable). While Region 6 feels comfortable with the ability of its BAT permits to control the discharge of toxics, the monitoring of specific chemical parameters alone does not measure toxicity. The most direct and cost-effective approach to measuring effluent toxicity is to perform a static bioassay test of the treated effluent.

The permittee will utilize the screening test procedures and LC50 methodology set out in "Methods for Measuring the Acute Toxicity of Effluents to Aquatic Organisms," EPA-600/4-78-012. No presumption should be made should the permittee pursuant to conditions specified in the permit need to establish the LC50 of the treated effluent. The bioassay information will be used by the state and EPA in determining which receiving waters may have existing or potential use impairments. The effluent bioassay information by itself will not be used to derive permit limits nor used to show cause and effect relationships.

Other data gathering such as fixed station monitoring, intensive surveys, fate and effect studies and/or chronic testing would be necessary to establish cause and effect relationships. All of this information together would then become a part of the continuing planning process used to direct attainability studies, site specific criteria modification studies, and water quality permitting requirements. The bioassay data will not be used in determining compliance with the permit limits. Compliance with the permit limits will rely on chemical testing.

#### Utility and Once-through cooling water.

Outfalls 321, 331, 341, 351 and 361 are Once-through cooling water and storm runoff from the caustic plant, chlorine plant and adjacent to the chloro-alkali II plant.

Reporting of flow and pH is asked for in the draft proposed permit. The cooling water was described as either non-contact or barometric CW from the caustic evaporators. A daily maximum limit of 5 mg/l net increase of TOD was established to insure contamination is maintained at a minimum. The technology employed to meet this requirement is timely plant maintenance and proper spill prevention and cleanup procedures.

The above monitoring applies to each internal outfall prior to entering the final discharge canal.

#### Area 400 - Propylene oxide and intermediate area.

The process wastewater and contaminated storm drainage is sent to the Central Treatment Plant. This stream accounts for a large portion of the 7 MGD treated there and is regulated at internal outfall 2001.

The NPDES application indicated once-through cooling water is discharged here and no priority pollutants were identified in the 43 MGD discharged. In addition to reporting the flow and pH, a maximum limit of 5 mg/l Net TOD was established at internal outfalls 411 and 421. The technology employed for the net TOD requirement is timely plant maintenance and proper spill prevention and cleanup procedures.

Storm runoff at outfalls 431, 441 and 451 are limited to 200 mg/l TOD. Contaminated stormwater can be sent to CTP, otherwise it is allowable to send relatively low contaminated stormwater directly to the effluent canal.

The permittee reported the presence of 1,2-dichloropropane in the OTCW. The potential for this component to be in the rainwater also follows. A limit of 0.2 mg/l daily maximum was established at 0411, 0421, 0431, 0441 and 0451 based upon our best professional judgment. The daily maximum represents the 99 percent confidence level. Abatement must be provided to maintain an effluent long term average discharge of approximately 12 lbs/day to comply with the approximately 52 lbs/day limitation. This level of abatement was determined to represent containment in the area equivalent to BAT reductions.

## B.

Area - 500 -Chlorinated solvents plant area.

Dow produces various chlorinated solvents by the process of direct chlorination, thermal chlorination and dehydrochlorination to produce a wide variety of products and by-products.

The NPDES application shows the following outfalls and descriptions:

<u>Operation</u>	<u>Flow, MGD</u>	<u>Description</u>	<u>Outfall</u>
non-contact river water	30.35	discharged	501
contact river water	2.15	steam stripper/ thermal oxidizer	511
contact process water	0.38	pH neutralization	521
non-contact condensate	0.04	discharged	531

Process wastewater contaminated with purgeable halocarbons can be successfully treated by physical/chemical methods to virtually any degree of reduction. For example, data presented in the Proposed Development Document for Organic Chemical Guidelines, EPA 440/1-83/009-b, February, 1983, Vol. III, describe steam stripping of the organic volatile priority pollutants. The key component here 1,2-dichloroethane, based upon solubility, etc., can be steam stripped from its solubility limit (about 900 mg/l) to 0.05 mg/l utilizing 8 theoretical trays and 0.018 lbs steam per lbs feed. Using an aqueous influx only 6 theoretical trays are required.

Permitties 2C application reported numerous purgeable halocarbons and aromatics in the discharge. The aromatics are derived from by-product alkalinity which will be regulated at the source LHCII and III. The application of BAT technology derived by best engineering or professional judgment is authorized by 40 CFR Part 122.

The 2.53 MGD process wastewater may be steam stripped to 0.1 mg/l for each of the purgeable halocarbons detected in the 2C application and the daily average limitation calculated:  $2.53 \times 8.34 \times 0.6 = 12.5$  lbs/day daily average, the once-through cooling water has been reduced to 15 MGD. DMR data from 1982 and 1983 supports this reduction. Containment efforts at the BAT technology level involves detection and correction. We have established this level at 0.05 mg/l in our best professional judgment. The purgeable halocarbons authorized from this source is calculated:  $15 \times 8.34 \times .05 = 6.25$  lbs/day 30-day average.

The first three-quarters of an inch of rainfall is collected for treatment as process wastewater above. Excess stormwater and other rain runoff adjacent to the process was reported in the 2C application. The allowable contamination of purgeable halocarbons in this 1.5 MGD discharge is 1 mg/l and is based upon an evaluation of the effectiveness of spill prevention and containment, proper curbs, timely maintenance and overall good housekeeping. The proposed limit for this source is calculated:  $1.5 \times 8.34 \times 1 = 12.5$  lbs/day 30-day average total purgeable halocarbons. The sum of the three sources is 32 lbs/day and the daily maximum derived based upon variability factors, empirical data, 99% confidence levels, etc. was established at 64 lbs/day. The analytical method proposed for compliance monitoring in the proposed permit is EPA Method 601 or 624.

Total residual chlorine abatement technology is available to reduce this pollutant to any degree by addition of excess reducing agent and allowing sufficient time for the reaction to approach completion. The technology established for this facility are source control, chemical reduction and other preventive measures or combinations. It is our best professional judgment that TRC can be controlled to within 1.0 mg/l daily maximum calculation:  $(2.53 + 1.5) 8.34 \times 1 = 34$  lbs/day daily maximum.

Nickel was found in this outfall at treatable quantities. The long term achievable limit for nickel was reported in the Inorganic Chemical Development Document at 0.19 mg/l. Application of a variability factor of 3.15 yields the daily maximum limit. Calculation:  $2.53 \times 8.34 \times .19 \times 3.15 = 12.6$  lbs/day daily max.

Biomonitoring was asked for reasons similar to outfall 003 area.

The cooling water streams, 0501 and 0531 are required to meet the net TOD limit of 5 mg/l in a rationale similar to the 003 area requirement.

#### Area 600 Vinyl I

The permittee produces EDC by direct and oxychlorination of ethylene. The EDC is thermally cracked to VCM as final product. Some VCM is chlorinated to 1,1,2-trichloroethane. The HCl by product is utilized in the oxychlorination reaction above.

The NPDES consolidated application shows the following streams and descriptions:

<u>Operation</u>	<u>Flow, MGD</u>	<u>Description</u>	<u>Outfall</u>
non-contact river water	59.6	discharged	611, 21, 31, & 41
non-contact condensate	0.25	scrubber water	681
contact process water	0.1	pH neutralized	661
treated contact process	0.03	steam stripper	651
treated stormwater	N/A	steam stripper	661
uncontaminated stormwater	N/A	discharged	671

The discharge monitoring reports for 1982 and 1983 indicate the average OTCW to be 52 MGD from area 600. The equipment is designed as non-contact or surface heat exchangers and theoretically should not be contaminated. However, exchangers develop leaks and other equipment failures result in contaminating the OTCW. The contamination must be detected and the problem corrected to maintain

low levels in the discharge. A consideration of the size and nature of the discharge along with the abatement options for control of purgeable halocarbons in this source was performed and an effluent limitation of 0.025 mg/l was established based upon BPJ. Such allowance for the daily average discharge can be calculated:  $52 \times 8.34 \times .025 = 11$  lbs/day daily average total purgeable halocarbons (TPH).

Permittee has constructed a rainwater impoundment to collect the first flush (3/4") of storm water. This stream and contact process wastewater are steam stripped prior to discharge to the effluent canal. A properly designed and operated stripper can achieve 0.1 mg/l of each of six components encountered. The final quantity may be calculated as follows:  $0.13 \times 8.34 \times 0.6 = 1 \text{ lbs/day}$  30-day average (TPH).

Chlorinated hydrocarbons from the above stripper and elsewhere are incinerated on site. The flue gases must be scrubbed for the HCl, etc. The scrubber water may be subject to contamination but not to the extent of the steam stripper bottoms. We have established the limit for this source to be 0.3 mg/l and the effluent limit is calculated as follows:  $0.25 \times 8.34 \times 0.3 = 1.0 \text{ lbs/day}$  30-day average TPH.

The Vinyl I area is the same size as the Solvents plant and we have determined to place the same storm water allowance because the first flush system is employed. The sources and limits are shown below:

<u>source</u>	TPH, lbs/day	
	<u>Avg</u>	<u>Max</u>
OTCW	11	22
process and stormwater	1	2
scrubber	1	2
excess stormwater	6	12
	<u>19</u>	<u>38</u>

The rationale is consistent with other chlorinated hydrocarbon facilities in Region 6 and the TPH in terms of lbs/1000 lbs product are within our empirical criteria.

Since 600 area commingles with 500 area the limit established at outfalls 511 and 521 must be monitored, the results summed, and the contribution from Vinyl I subtracted and reported. The biomonitoring at 501 would apply to the combined vinyl and solvents areas.

#### Area 700 - Light Hydrocarbons I and II (LHC)

The permittee converts ethane/propane and naphtha to ethylene, propylene and other olefins/aromatics by a thermal cracking process. The flows are shown below:

<u>Stream</u>	<u>Flow</u>	<u>Treatment</u>	<u>Monitoring Point</u>
OTCW	150 MGD	discharge	0711
contact water	.03 MGD	Benzene removal	0721
by-product alk.	.3 MGD	Benzene removal	0731
wash, rain water	<.5 MGD	discharge	0741

LHC II is operating but LHCI is down and probably will not be restarted. The permittee is required to limit the net TOD increase in 0711 to 5 mg/l in the proposed permit. The technology employed to comply with this requirement is early detection of contamination and prompt corrective action.

The contact process water stream contains treatable priority pollutants and the permittee is presently installing a proprietary physical/chemical treatment system (benzene removal). Proposed BAT Organic Chemicals guidelines have been promulgated in 40 CFR Part 414.34. No data are available other than flow for this discharge. Therefore, we propose to utilize the above proposed guidelines for regulating this small process stream for BOD<sub>5</sub>, TSS, Total purgeable aromatics, phenol, acenaphthalene and fluorene. Other parameters regulated are TOD, Oil and Grease and naphthalene on a 1/week frequency.

The LHC II and III process generates a by-product alkalinity stream resulting from absorption of CO<sub>2</sub> in weak cell liquor. The stream is used to neutralize excess HCl in the effluent canal near the solvents plant. The 2C application showed treatable quantities of purgeable aromatics, polynuclear aromatics, copper, lead, and nickel. The permittee is presently constructing a proprietary treatment system (benzene removal) to meet BAT requirements at the treatment system effluent. The treatment system will be designed to handle both streams so effluent limitations proposed are in terms of concentration. Monitoring may be placed at each plant or the header to the solvents area provided permittee makes such modification request.

The proposed Organic Chemicals guidelines were utilized to establish BAT for BOD<sub>5</sub>, TSS, PA's and PNA's. BPJ was utilized to establish BAT for Oil and Grease, phenol, copper, lead and nickel at 0731 and 2211 or both.

Outfall 0741 is regulated by Region 6 standard requirements for relatively uncontaminated storm runoff plus requirements for potential contamination by phenol and purgeable aromatics.

#### Area 008 - Glycol II

The company reacts ethylene and oxygen over a fixed bed catalyst to produce ethylene oxide. Ethylene oxide is also hydrolysed to ethylene glycol. Treatable process wastewater is collected and sent to central treatment system. The effluent limitations established are to insure all treatable sources are sent to Central Treatment system. Chromium and zinc limitations were established in the cooling tower blowdown. These limitations were established by empirical data and experience in regulating CTBD. The limits are based upon the 92 and 99% confidence limits for treatment of chromium and zinc by a variety of methods. Included are electrolytic or chemical reduction followed by sedimentation, ion exchange treatment or side stream softening.

The company plans to eliminate chromium and zinc corrosion inhibitor in several cooling towers elsewhere at the facility. The towers will be renovated to remove traces of chromium and the removed material will be treated at the 800 area. Such operation is permissible and the requirements under such operation will be addressed in Part III.

Treatable quantities of nickel were reported in this stream.. The Inorganic Chemical development document established treatment technology for nickel removal at 0.2 mg/l 30-day average and 0.5 mg/l daily maximum (99% confidence level). The lbs/day limitations were calculated based upon the flow and the above technology.

The only stream that by-passes 0801 is intermittent acid/caustic from the water softener system. These materials are neutralized in the effluent canal prior to discharge at 0001 and are subject pH requirements there.

Area 009 - Poly "B" Plant.

The permittee manufactures high density polyethylene with a low pressure slurry process. For this area no priority pollutants were reported in the application. It was established in our best professional judgement that BPT = BCT and, accordingly no changes were established for this area.

Area 010 - Poly "A" Plant.

The permittee manufactures low density polyethylene by the original "high pressure" process. Here again, no priority pollutants were identified in the discharge. No changes in the permit were established since BPT = BCT for this source.

Area 1100 - Sanitary Waste Treatment System.

Outfall 1101 is the treated sanitary sewage. The BPT requirement was retained in the proposed BAT permit since BPT = BCT. LDNR requested the daily maximum TSS be 45 mg/l, not 60 mg/l.

Area 1200 - Railcar loading and plant maintenance.

The NPDES application indicates approximately 30,000 gal/day are discharged from this area. The permittee has agreed to terminate cleaning tank cars with organic wastes; only clean acid and caustic cars requiring neutralization only will be cleaned here. Organic wastes will be retained for treatment or disposal elsewhere. The effluent limitations established for this discharge, including uncontaminated storm drainage, are 55 mg/l daily maximum TOC, 15 mg/l daily maximum Oil & Grease, 75 mg/l daily maximum TOD and a pH range of 6.0 to 9.0.

Area 1300 - Power Plant.

Once-through cooling water and boiler blowdown is discharged from this area. Reporting of pH was established as the regulatory requirement for this source.

Area 1400 - Water treatment plant.

The permittee converts raw river water to "potable" water and returns the coagulated river silt to the Division Return Canal. The permit conditions are determined by our clarifier return policy - the company monitors and reports TSS, COD, alkalinity and clarifying agents added during the treatment process.

Area 1500 - Chlorinated methanes

The permittee manufactures methyl chloride by the catalysed hydrochlorination reaction of methanol and HCl. Methyl chloride is thermochlorinated to higher chloromethanes in a non-catalysed reactor. Still bottoms are thermally oxidized and the flue gas scrubbed with non-contact river water.

Outfall 1511 is about 20 MGD once-through cooling water. Dow reported the outfall is relatively free of contamination. We have concluded, based upon BPJ, that chlorinated organics can be excluded in this stream at less than 0.04 mg/l or 7 lbs/day on a daily maximum basis. This requirement is technically feasible by early detection and correction of leaks. The materials of construction, being compatible with the process, makes this requirement feasible.



Outfall 1521 is comprised of incinerator scrubber water, treated storm drainage and untreated excess stormwater after collection of the first (3/4") flush for treatment. A daily maximum requirement of 1 mg/l was established at this discharge. This requirement expressed in weight is 5 lbs/day daily maximum total purgeable halocarbon (TPH). The limit is technically feasible by careful control of the incinerator and steam stripper for the treated effluent and source control for the untreated storm drainage.

Process water (1531) and sulfuric acid (1541) can be treated to less than 0.1 mg/l TPH by physical/chemical treatment. The combined limit resulting from the treatment yields 1 and 2 lbs/day avg/max per day.

The storm drainage from methyl chloride storage area should not contain purgeable halocarbons because methyl chloride is too volatile. Therefore, our standard storm water requirements of 55 mg/l daily maximum TOC and 15 mg/l daily maximum Oil and Grease were applied to this effluent.

The combined TPH limitations from the 1500 area results in a daily average discharge of 0.006 lbs TPH/1000 lbs of product. This is essentially the same effluent reduction for other producers in Region 6 BAT permits.

#### Area 1700 - Vinyl II

The permittee manufactures 1,2-dichloroethane by both oxychlorination and direct chlorination of ethylene. The EDC is then dehydrochlorinated to vinyl chloride and hydrochloric acid. The acid is recycled back to the oxychlorination reaction above.

The permittee has three discharges from this area. Uncontaminated storm drainage from vinyl chloride storage (1731), excess storm water that cannot be collected by the first flush impoundment (1721) and the ecology area discharge (1711) which is comprised of treated stormwater, cooling tower blowdown, incinerator scrubber water, etc. Process wastewater is steam stripped and sent to central treatment (1741) for organic biological reduction.

The TPH in the process stream to central treatment prior to steam stripping is generally comprised of about 90% EDC, 5% chloroform and minor amounts of other halocarbons. BAT treatment should result in a 0.3 mg/l maximum concentration based upon three major halocarbons potentially present in the 0.12 MGD stream to CTP. Since CTP removes about 70% of these components by biological reduction, the limit applied at 1741 is established at 1.0 mg/l or 1.0 lbs/day daily average and 2 lbs/day daily maximum.

The ecology area discharge 1711 is comprised of the following:

<u>stream</u>	<u>flow</u>
CTBD	0.72 MGD
incinerator scrubber	2.1
stripped storm water	0.2
	<u>3.0 MGD</u>

Daily average limitations for each stream was established by BPJ and the calculations are as follows:

CTBD	$0.72 \times 8.34 \times 0.1 = 1$
incinerator scrubber	$2.1 \times 8.34 \times 0.4 = 7$
stripped storm water	$0.2 \times 8.34 \times 1.0 = 4$
Total	12 lbs/day
daily max	= 24 lbs/day

These limitations were applied at 1711 for total purgeable halocarbons. Reporting of TOD was asked for and a limit for total residual chlorine established similar to the requirements at Vinyl I.

The excess storm water at 1721 was limited to 1.0 mg/l total purgeable halocarbons and total residual chlorine as BAT requirements. The standard practice to limit TOC and Oil and Grease was also included at this outfall. The storm runoff from the vinyl chloride was given Region 6's normal storm water requirements of 50 mg/l daily maximum TOC and 15 mg/l daily maximum Oil and Grease.

#### Area 018 - Dowanols/ethanolamines

Ethylene oxide is reacted with aqueous ammonia in a high pressure non-catalysed process to produce ethanolamine. Also Ethylene oxide is reacted with butanol or propylene oxide is reacted with methanol to produce Dowanols.

The sanitary wastes and contaminated waste waters are sent to the central treatment systems. Waste water, stormwater and miscellaneous waters are monitored and discharged if treatment is not necessary. These are sent to the treatment plant if treatable.

If these streams are within the proposed Organic Chemical guidelines they may be discharged as outfall 1801, otherwise they must be treated. The BOD<sub>5</sub> and TSS are the proposed Organic Chemical G/L limitations. Ammonia nitrogen and organic nitrogen limitations were also established at 50 mg/l based upon best engineering judgement. Chromium limitations were incorporated at this outfall to be applied at the CTBD. The limitations are our standard provisions for control of cooling tower corrosion inhibitor in concentration limits.

#### Area 1901 - Power II.

This discharge is comprised of utility waste water and cooling tower blowdown (CTBD). The only parameters to be regulated are the flow and pH monitoring.

#### Area 020 - Central treatment facility.

The central treatment facility takes process wastewater from Dowanols/ethanolamines, Glycol I and II, light hydrocarbons II and III and others, in addition to sanitary wastes from various sections of the plant. The system is composed of a 10 acre equilization pond, three trains of unox reactors followed by clarification and sludge dewatering.

Subpart C, high water use, oxidation subcategory of the proposed Organic Chemical Guidelines apply to this outfall. The BOD<sub>5</sub> and TSS standards were established in concentration. Effluent limitations for TOD, purgeable halocarbons and purgeable aromatics were established based upon best engineering judgement technology.

About 90% of the wastewater treated at CTP is from the glycol units. The only organic priority pollutants detected during the priority pollutant monitoring for the 2C application was 1,2-dichloropropane and bis (2-chloroethyl) ether. These are by-products of propylene glycol chlorohydrin process. There is a potential for purgeable halocarbons, purgeable aromatics and polynuclear aromatics in the treated effluent. The proposed Organic Chemical Guidelines were utilized in establishing the effluent limitations for purgeable halocarbons and purgeable aromatics. The company will analyze the discharge by EPA Method 601, 602, 603, or 624 and meet the limits proposed in the Organic Chemical Guidelines.

The Organic Chemicals proposed guidelines were the basis for BOD<sub>5</sub> and TSS. Subpart C - Oxidation Subcategory for "High Water Use" standards are 42 mg/l 30-day average and 106 mg/l daily maximum for BOD<sub>5</sub> and 84 mg/l 30-day average and 246 mg/l daily maximum TSS.

The BPT permit controlled TOD as the sum of Outfalls 001, 007, 017, and 020 which were chlorinated polyethylenes, light hydrocarbons, EDC/VCM and central treatment system. Past performance data reported on Discharge Monitoring Reports (DMRs) from July, 1981, to June, 1983, were used to establish TOD limits for this outfall. The long term average discharge of TOD was 13429 lbs/day with a standard deviation of 5611 lbs/day. The 99% confidence level for the 30-day average TOD at the central treatment system calculates to be 26500 lbs/day. The monthly average data appears to be normally distributed:

$$U.99 = R/S + \frac{28031-5080}{5611} = 4.09 \text{ for the 24 data pts.}$$

Goodness of fit for 25 determinations allow an R/S to be as high as 5.06.

The Max/Avg ratio for TOD in the PBT permit was 1.35; 26500 x 1.35 = 35850 lbs/day TOD daily maximum. Such limit would have produced a daily maximum violation during two of the 24 months reported. The DMR's report only one maximum per month. It appears that the 99% confidence level at 2001 is very close to 36,000 lbs/day.

The 26500 lbs/day TOD in the 7.2 MGD flow represents a concentration of 441 mg/l daily average TOD. TOD/TOC and BOD/TOC correlations supplied by Dow indicate the average concentration of BOD in the CTP effluent is less than 90 mg/l. It is our best professional judgment that the TOD limit is in line with BCT.

Biomonitoring was asked for at 2001 which follows the previously mentioned Region 6 rationale for assessment of BAT treatment facilities ability to remove toxics. The 2C application reported 1,2-dichloropropane and is (2-chloroethyl) ether as the only priority organic in the effluent. The levels are not different from that expected by the treatment employed at Dow. The priority metals reported in the treated discharge were present at levels readily detected by the analytical method employed but well below levels obtainable by the application of BAT treatment.

Area 2200 - Naptha (Light Hydrocarbons III)

The permittee cracks ethane, propane and naptha to ethylene propylene and other olefinic components. Carbon dioxide is removed from the reaction mixture by absorption into a stream of weak cell liquor. The weak cell liquor is about 10% NaOH and 15% NaCl. The resultant sodium carbonate/bycarbonate alkalinity is used to neutralize excess acidity elsewhere in the plant. Dow calls this stream by-product alkalinity and is used mainly in the solvents area.

The permittee tried activated carbon absorption treatment on this stream but performance proved to be only marginal removal of priority pollutants. The company has under construction a major capital expenditure a physical/chemical treatment system which they call benzene removal. Target date of completion is December 1, 1984.

The permittee also collects the first 3/4" of storm water in the 2200 area for treatment. The treated storm water is comingled with CTBD, monitored at 022C and discharged to the effluent canal.

The only other stream is the excess storm water that exceeds the containment in the rainwater storage tank. This stream is monitored when flowing at monitoring point 022B.

The by-product alkalinity stream was monitored only if being directly discharged to effluent canal through monitoring point 022H. However, the company has agreed to meeting permit limits at the naphtha plant treatment system regardless of the final destination of the stream.

The proposed Organic Chemicals guidelines weighed heavily in our selection of permit limitations for this process. Benzene, toluene, ethyl benzene and naphthalene along with several other polynuclear aromatics, were reported on the 2C application for this area's discharges. The proposed guidelines were based upon activated sludge technology and Dow will be using a physical treatment scheme. Steam stripping is an effective treatment technology for the removal of volatile aromatics. For example, the development document describes operating conditions for steam stripping to 0.05 mg/l with respect to the number of theoretical trays required at a modest steam to feed ratio of .018 lbs/lbs.

The proposed organic chemical guidelines are therefore determined to be applicable based upon our best professional judgment for the parameters benzene, toluene and ethyl benzene. Monitoring only for naphthalene was asked for as an indicator for all polynuclear aromatics (PNA).

The 2C application indicated metals in the discharge in treatable concentrations. The technology of effective treatment of metals is thoroughly described in the Inorganic Chemical Development Document as follows:

Metal	BAT treatment, Line Filtration	
	Avg. (mg/l)	Max. (mg/l)
Copper	0.3	0.6
Lead	0.15	0.3
Nickel	0.3	0.6

## BAT treatment, Sulfide Filtration

Copper	.05 to 0.5
Lead	.05 to 0.4
Nickel	.05 to 0.5

The permittee has a choice of treatment options above to meet the limitations.

Dow indicated the by-product alkalinity from LHC II (0731) and LHC III (2211) are sent to a common header and used to neutralize excess HCl coming from solvents and Vinyl II area. This stream is normally sent there except in the event of a shut down at solvents. Then the stream will go to the effluent canal near the respective treatment system. In addition, the proprietary benzene removal treatment system will be designed to be able to treat the combined LHC by-product alkalinity streams in case one is being renovated or a failure occurs. It appears that regulation of these outfalls can be accomplished by deriving concentration requirements and changes of flow, caused by one treatment system accepting both streams, would not affect compliance.

The effluent limitations and monitoring requirements for Outfalls 0731 and 2211 are established for the following parameters:

TOD: It is difficult to evaluate the new treatment system on the available data. However, using technology based upon activated sludge treatment a BOD<sub>5</sub> of 58 and 146 has been established in the Organic Chemical proposed guidelines. A TOD/BOD<sub>5</sub> ratio of 3 appears reasonable for non-biological treatment.  $3 \times 58 = 174$  or 200 mg/l daily average and  $3 \times 146 = 438$  or 400 mg/l daily maximum.

Oil and Grease: API separator technology is 10 mg/l 30-day average and 15 mg/l daily maximum Oil and Grease.

Phenol: Steam stripping technology can reduce phenol to 0.1 mg/l average and 0.2 mg/l daily maximum. Even though biological treatment could achieve lower phenol we have determined that the above technology is appropriate.

Total Purgeable Aromatics: Steam stripping, air stripping, activated carbon absorption and biological treatment have been established as technology for removal of purgeable aromatic components benzene, toluene, ethyl benzene, etc. The achievable limits are set forth in the G/L Development Document and the proposed organic chemical guidelines as follows:

<u>Component</u>	<u>30-day Avg.</u>	<u>Daily Max.</u>
Benzene, mg/l	.075	.125
Toluene, mg/l	.125	.225
Ethyl Benzene, mg/l	.150	.275

Since all components will not necessarily be present at the same time the requirement for purgeable aromatics was established as 0.2 Avg. and 0.35 daily maximum.

Naphthalene: This component was identified in the discharges and requires regulation. Very little data is available on the results of treatment technology for naphthalene. Apparently, naphthalene is effectively removed by well operated bio-systems or else it would have been encountered in the organic chemical guideline development work. For this outfall, naphthalene was considered an indicator parameter for the several polynuclear aromatics and the limits is based upon the organic chemical proposed guideline for several of those components, i.e., 0.05 mg/l maximum was rounded up to 0.05 mg/l average and 0.01 mg/l daily maximum.

Cu, Pb and Ni: These levels were established in the Inorganic Chemical Guideline Development Document. The proposed guidelines are not applicable since that rationale was based upon activated sludge technology.

The above rationale was used to establish limitations at Outfalls 2221 and 2231. These discharges are treated (first flush) stormwater and cooling tower blowdown for 2221 and excess untreated stormwater at 2231. Metals and TSS are not appropriate for these outfall requirements.

#### Area 024 - Research Pilot Plant.

This area's operations change from time to time and the flow is relatively small. The technology utilized to develop the proposed Organic Chemical Guidelines were established as effluent limitations for this outfall. The permittee may discharge this effluent directly within the proposed requirements. However, if treatable quantities of pollutants are detected as BOD<sub>5</sub>, or TSS, the effluent must be treated. Treatment at this location is entirely optional since the waste may be sent to the central treatment facility and meet the same limitations at that monitoring point.

#### Area 025 - Catalyst Treatment.

The effluent from this area appears to be uncontaminated river water except that treatable levels of mercury were reported in the NPDES application. Mercury treatment technology is well established. Perhaps the most accepted technology is sulfide precipitation and filtration. This technology can achieve a 30-day average limit well within 0.05 mg/l mercury. The technology is described in the various Inorganic Chemical Effluent Guidelines Development Documents.

Total Suspended Solids reporting was asked for to help in the assessment of the level of effort employed in the mercury treatment system.

#### Area 026 - Ethylene Carbonate Plant.

The company did not submit data for this outfall since the plant was shutdown at the time of sampling for the NPDES Application. However, this process is not anticipated to produce significant contamination with regard to priority pollutants. The product is a condensation reaction with carbon dioxide and ethylene oxide and therefore the Organic Chemical Proposed Guidelines apply via Subpart D. These requirements for BOD<sub>5</sub> and TOD were established at Outfall 2601 as BCT in accordance with 40 CFR §414.43 proposed March 21, 1983.

Dow may provide for treatment at the carbonate plant or send the contaminated effluent, if appropriate, to the central treatment facility and meet the requirements at 2001.

Area 027 - Coal Gasification Proto Plant.

The Company converts coal, steam and oxygen to a combustible gas in a proto scale reactor unit. The unit is to be operated at various conditions to define optimum operation at various objectives.

The application indicated minor amounts of priority metals in the discharge, i.e., below treatable levels. The 1.4 MGD process and scrubber water contained, at times, treatable quantities of aromatics, phenols and polynuclear (base neutral) aromatics. The latter data showing decidedly lower contamination. Three halocarbon species were reported requiring regulation.

Halocarbons can be steam stripped to very low levels. Other treatment options are activated carbon absorption, biological treatment and other physical/chemical processes. The final treated effluent should be less than 0.1 mg/l each halocarbon. The daily average and daily maximum limits are calculated:

$1.44 \times 8.34 \times 0.3 = 3.6$  or 4 lbs/day 30-day average.  
 $2 \times \text{DA} = 8$  lbs/day daily maximum.

Purgeable aromatics such as benzene, toluene and ethylbenzene can be abated with similar technology. Benzene and toluene were reported in the 2C and the limits calculated:

$1.44 \times 8.34 \times 0.25 = 3$  lbs/day daily average and 6 lbs/day daily maximum.

The Company reported 3.3 lbs/day of polynuclear aromatics in the discharge in 1981. There were 11 components detected including naphthalene. The proposed Organic Chemical Guidelines indicate several of the PNA's can be reduced to 0.05 mg/l by activated sludge technology. Activated carbon may be very effective for these components. Since the new data indicate substantial reduction in raw waste load and base neutral analytical method is expensive, the PNA limit of 3 lbs/day daily average on a 1/Month frequency was established by 402(a)(1). However, naphthalene will be monitored on a weekly basis.

Area 29 - Coal Pile Storm Runoff

Standards for regulation of coal pile runoff were promulgated in the Steam Electric Power Plant Effluent Guidelines in 40 CFR §423 on November 19, 1982. Total Suspended Solids requirement was established not to exceed 50 mg/l except that any untreated overflow from facilities designed, constructed and operated to treat the coal pile runoff which results from a 0000 year, 24-hour rainfall event shall not be subject to the limitations in §423.05(k).

Area 029 - Old Tank Farm Scrubber Water and Storm Runoff.

The NPDES application shows treatable quantities of priority pollutants, chloroform, 1,2-dichloroethane, tetrachloroethylene and minor amounts of other purgeable halocarbons. The other parameters appear to reflect uncontaminated storm runoff.

Technology is available to reduce these priority pollutants well below the mg/l range reported in the application by physical/chemical treatment. For example, steam/air stripping or activated carbon technology is described in the Organic Chemical Development Document and is addressed earlier in this fact sheet. The proposed effluent standards in 40 CFR §414.54 were utilized to establish the effluent limitation in the proposed permit. Since the flow is not continuous the monitoring frequency is 1/day or 1/week when flowing for TOC, Oil and Grease, and pH for the former and the priority pollutants the latter frequency.

#### Area 030 - Northwest Landfill Stormwater Runoff.

The northwest landfill area is the disposal site of the refuse and wastes from the cell maintenance area. These materials are stored in containers placed in sites which conform to the State of Louisiana Hazardous Waste Regulations. The principal constituent is asbestos.

The permittee reported in the application that all priority pollutants were believed absent except for Chromium and Copper. Analysis for these components showed them to be well below technologically treatable levels.

The normal stormwater requirements of TOC, Oil and Grease and pH were established for regulating this discharge. Asbestos was not regulated for three important considerations: 1) the analytical method requires an electron microscope and is expensive and time consuming; 2) Total Suspended Solids interfere with the detection limit, e.g., 50 mg/l TSS detection limit is several million fibers per liter; and 3) domestic water supply plants remove TSS to less than 10 mg/l and therefore most asbestos is removed in the water treatment process.

Recognition of the fact that the asbestos is contained in an approved landfill, i.e., clay lined and properly capped, airborne transport from the active site is the only potential source of migration. We therefore expect very little asbestos in the stormwater drainage outside the active disposal sites.

#### Outfalls 002 Through 008 - Stormwater Drainage to Bayou Bourbeaux.

LDNR identified several stormwater point sources which discharged to Bayou Bourbeaux. Bayou Bourbeaux flows in a general westward direction to Bayou Grosse Tete. This receiving stream is in Segment 1201 of the Terrebone Basin. The segment has been designated Effluent Limited (EL), i.e., any segment in which water quality standards are being met and will continue to meet applicable water quality standards or where there is adequate demonstration that water quality will meet applicable standards after the application of effluent limitations required by the Clean Water Act as amended.

These discharges are comprised of area stormwater drainage fairly remote from process areas and the possibility of contamination is anticipated to be infrequent. The Region 6 traditional stormwater requirements of 50 mg/l maximum Total Organic Carbon, 15 mg/l maximum Oil and Grease and pH of 6.0 to 9.0 standard units were established for these discharges. These limitations represent maximum limitations for uncontaminated stormwater.



This does not imply that the stormwater discharges do not contain process contaminants, although the permit authorizes discharge of process pollutants exclusively out of Outfall 001. Incidentally, fugitive or other unintentional contaminants may be discharged provided the discharge complies with the terms of the NPDES Permit.

10. The requested variance(s) appear justified for the following reason(s):

N/A.

11. The permit is in the process of certification by the State agency. A draft permit and draft public notice will be sent to the District Engineer, Corps of Engineers, and to the Regional Director of the U.S. Fish and Wildlife Service, and the National Marine Fisheries Service, prior to the publication of that notice.

12. The public notice describes the procedures for the formulation of final determinations.

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